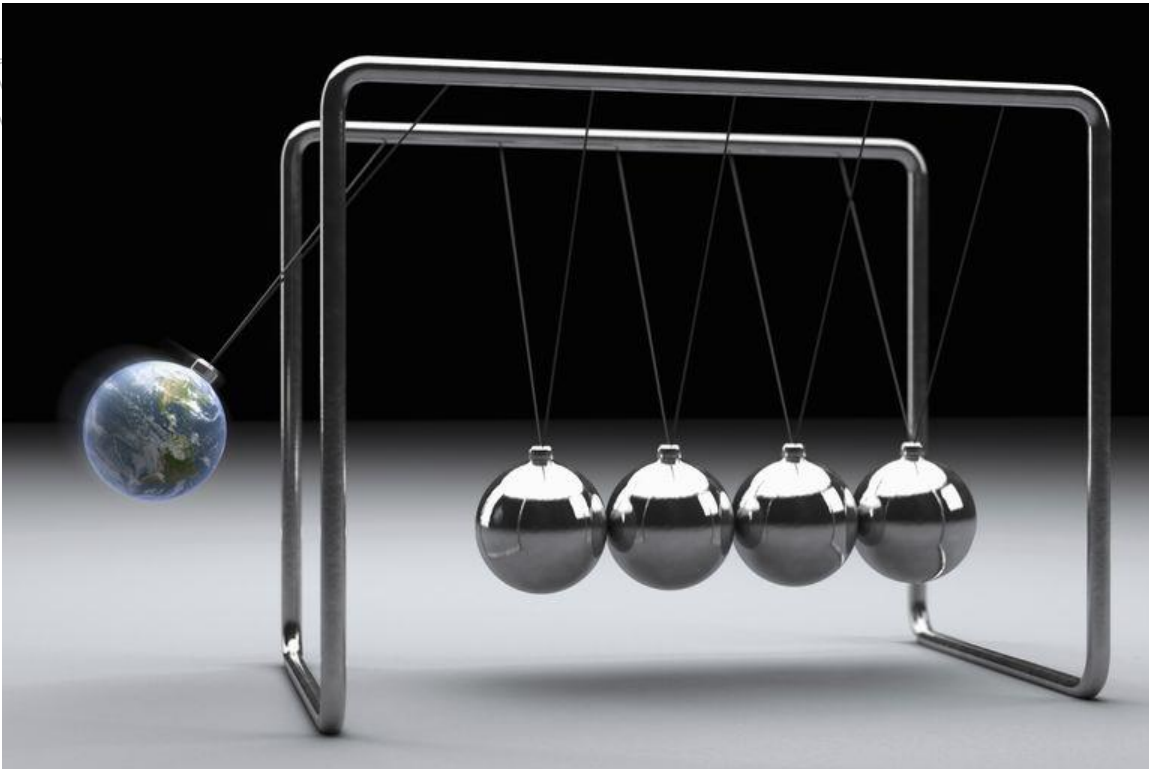


DR. ALVIN'S PUBLICATIONS

LAWS OF PHYSICS APPLIED TO SALES MANAGEMENT

DR. ALVIN ANG



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PART I

ABSTRACT

- This paper gives an analogy between sales management and the laws of physics coming from a sales representative's perspective.
- It collates the real life experiences of the author, both as a sales consultant as well as a sales trainer.
- Elementary laws of physics such as pressure, work done and energy are conceptualized to management matters such as focus, sales revenue, motivation and enthusiasm.
- This concept was also taught to participants (the sales representatives) of Lalamove.com (Singapore) during their sales trainings and was well received.

KEYWORDS

- Laws of Physics,
- Kinetic Energy,
- Potential Energy,
- Pressure,
- Work Done,
- Power,
- Time Management,
- Focus,
- Motivation,
- Enthusiasm,
- Sales Revenue,
- Sales Management.

PART II

INTRODUCTION

- Experiential learning is the process of learning through experience, and is more specifically defined as "learning through reflection on doing" (Wikipedia 2019).
- This article is a result of the author's experiential learning in the professional sales line.
- It relates some of the common laws of physics to sales management.

Table 1: An Analogy between Sales Management and Laws of Physics

| Sales Management | Law of Physics |
|---|-------------------------------|
| Envisioning and working towards the Vision | Newton's First Law of Motion |
| Maintaining the Mission | Momentum |
| Focus | Pressure |
| Goal Setting | Newton's Second Law of Motion |
| Choice of Activities | Newton's Third Law of Motion |
| Sales Revenue | Work Done (Displacement) |
| Raising Sales Revenue Potential | Work Done (Energy Change) |
| Energy Management | Total Conservation of Energy |
| Prominent Rate of Sales | Power |

- Table 1 shows the analogy/relationship between universal laws of physics and sales management.
- The flow of this article will follow the sequence as presented in Table 1.
- These concepts have been taught and presented to Lalamove's (Singapore) sales team and were well received.

- Participants could readily relate their daily job scope and activities to these universal laws because they have some prior learnings in theoretical physics during their secondary school.
- Lalamove, originally known as EasyVan, is an on-demand logistics company based in Hong Kong.
- Lalamove was founded in December 2013 by Chow Shing-Yuk, which operates in mainland China, Hong Kong, India, Malaysia, the Philippines, Singapore, Taiwan, Thailand and Vietnam (Wikipedia 2019).
- They are most popular with the general public because they execute their operations mainly on the Google Play Store (Wikipedia 2019).
- The author has performed some studies with Lalamove.com and have also helped them identify gaps in their sales operations.

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PART III

LITERATURE REVIEW

- Since this paper is based on the experiential learning of the author, it consists mainly of real life analogies, rather than empirical or theoretical research works.
- Thus, the literature review used is mainly practical, on the web research (e.g. Wikipedia / blogs / sales training books).
- It may not have the extensive academic literature review as most other publications do.
- However, the laws of physics and/or concepts of sales management are fundamentals learnt in any elementary school.

RELATING NEWTON'S LAWS OF MOTION TO SUCCESS

- Heap (2013) Was the only author that tries to relate Newton's three laws of motion to the laws of success.
- Heap (2013) Likened Newton's first law of motion to perpetual motion, or rather, perpetual success.
- In his article, he gives an analogy of a person having a bad day.
- Soon after, the "object in motion in a constant direction" leads to that person having a bad week.
- In short, he is saying that the person will continue in a "bad direction" unless something acts upon it to change its direction or stop it.

- He gives some suggestions on how one could change the course of direction – from bad to good – by positive self-talk, exercise etc.
- Heap (2013) Continues to liken Newton’s second law of motion to “accelerating success”.

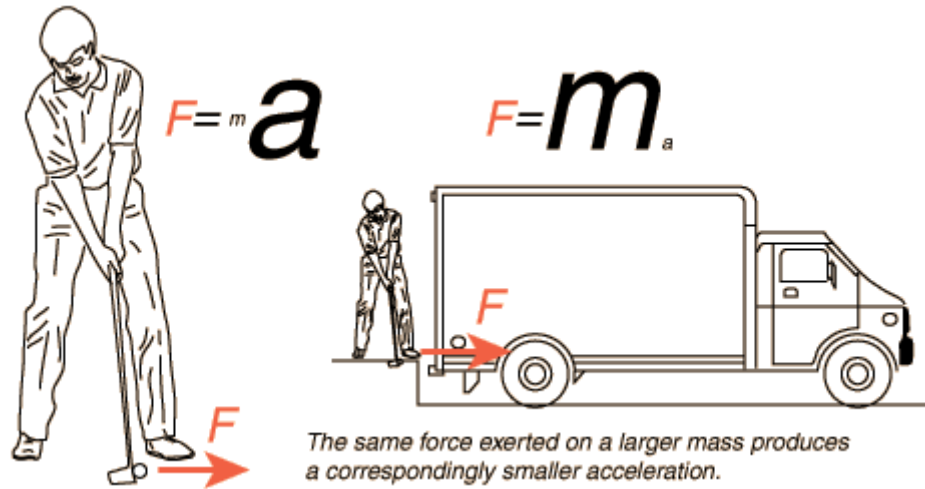


Figure 1: $F=ma$ (Heap 2013)

- Figure 1 shows how Newton’s second law of motion is applied to “moving goals”.
- Since Newton’s second law primarily states $F=ma$, where F is the force, m is the mass and a is acceleration, Heap (2013) described force to be the amount of effort one put into achieving his goal, mass to be the size of one’s goal and acceleration to be how quickly one accomplishes his goal.
- Essentially, what he is saying is that the smaller the size of one’s goal, the lesser the effort and the faster it get to completion. And vice versa.
- Heap (2013) Also likened Newton’s third law of motion to action and reaction – or “reaping what you sow”.
- He imagined it to be like a set of scales, perfectly balanced.

- On one side holds a person's negative aspects of life (e.g. smoking, lazing around etc.).
- On the other side holds positive aspects (e.g. studying hard, graduating etc.).

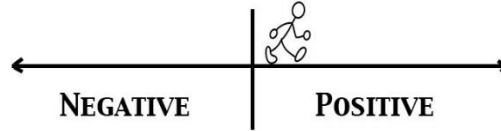


Figure 2: Striving to head towards Positive Progress and walking away from Negative Hindrances (Heap 2013)

- Each time a negative habit is removed from one side, it is placed on the positive side of the scale.
- Figure 2 shows a person using the action/reaction law: his action is walking towards positive progress, and naturally, the natural reaction is that of losing his negative hindrances.
- For (Heap 2013, Heap 2013, Heap 2013), though they emulate the Newton's three laws of motion to laws of success, however, his publications are not related directly to sales management.
- Apart from Heap (2013), it is not known (at this current moment) any other author/s using the laws of physics in sales management.

THE SALES MANAGEMENT STEPS

Levine (1990) Described the sales process (in the case of insurance sales) to be a six step process:

1. Envisioning / Dreams
2. Goal Setting
3. Activities
4. Positioning or Opening
5. Closing
6. Follow Up

- Several authors, such as Tracy (2017) [ENREF 8](#), Robbins (1994) (who are famous sales trainers), and Breithaupt (2003) have also described the sales process to be similar as above.
- However, none of them have used laws of physics as analogies to this five step process.
- In this paper, we shall attempt to do so.

RELATING CORPORATE STRATEGY TO SALES MANAGEMENT

- Berry (2014) Summarized the topic of corporate strategy into Figure 3.
- He described the importance of the company's vision and how it translates to the goals, strategies, tactics and activities for every employee of the company.
- Assimilating the six step sales process by Levine (1990) and the corporate strategy structure by Berry (2014), we can see that at the top, it's always the vision that comes first, and at the bottom, it's the activities to support that vision.
- This paper will be sectioned to follow the top-down layout as in Figure 3.

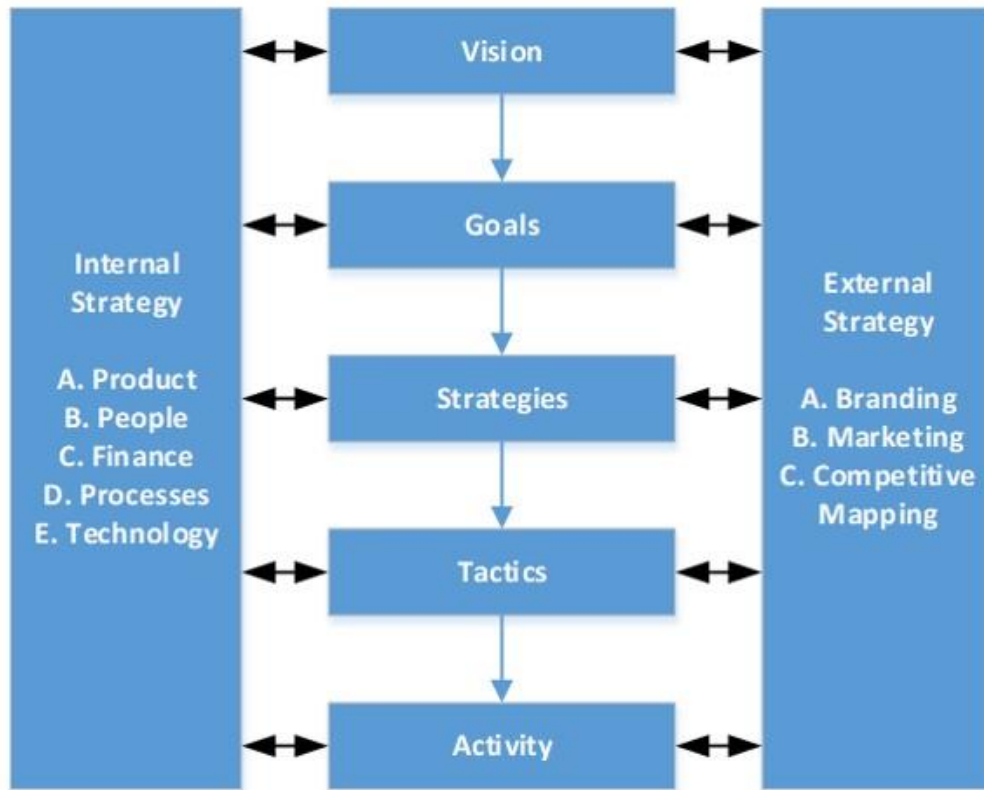


Figure 3: How a Company's Vision Directs Goals, Strategies and Activities (Berry 2014)

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PART IV

HOW ENVISIONING AND WORKING TOWARDS THE COMPANY'S VISION RELATES TO NEWTON'S FIRST LAW OF MOTION

- Newton's first law of motion states: An object either remains at rest or continues to move at a constant velocity, unless acted upon by a force (Wikipedia 2019).

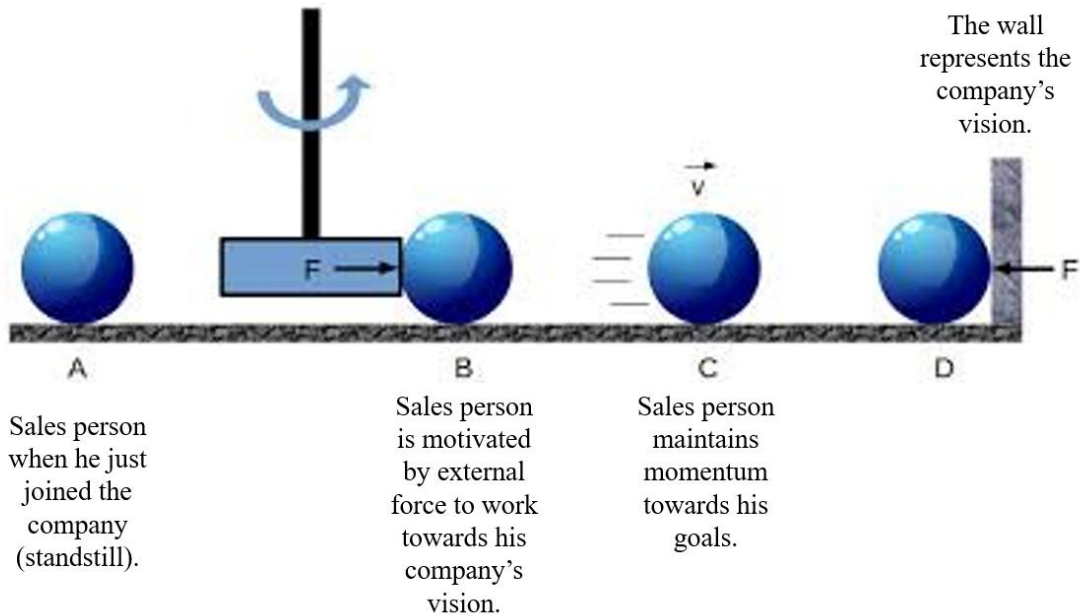


Figure 4: How Envisioning and Working towards the Company's Vision relates to Newton's First Law of Motion (engineer 2019)

- Once the company has set the vision for the sales team, every individual of that team needs to internally align their personal vision to encompass the company's vision.
- This is crucial because once they gain sales inertia, they will be moving towards that common vision.
- These sales people will "continue to move at a constant velocity" towards that direction, "unless acted upon by an external force".

- Figure 4 demonstrates how envisioning and working towards the company's vision relates to Newton's first law of motion.
- This external force could be anything that does not align itself with the company's vision.
- For example internal politics, change of upper management and directives, or personal pursuits that distract its people, diverging from the original vision; which eventually causes sales people to deviate from their original mission.

HOW THE LAW OF MOMENTUM HELPS TO MAINTAIN THE VISION FOR SALES PEOPLE

- Once the salesperson's vision has been aligned with the company's, he should keep the momentum.
- In physics, momentum is the product of the mass and velocity of an object (Wikipedia 2019).

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$\rho = mv$

Where

- ρ : Momentum, which represents the stability / persistency of the salesperson, pressing onwards to his vision.
- m: mass, which represents the activities of the salesperson. His activities should align with his overall vision. This will be elaborated in the later section: Work Done as Force x Distance.
- v: velocity, which represents the speed and direction the salesperson is working towards. Since velocity is a vector, the direction obviously should be towards his overall vision.

PART V

HOW FOCUS RELATES TO THE LAW OF PRESSURE

- Oftentimes, we hear of sales people losing their focus (Levine 1990).
- The reasons could vary from person to person.
- Sometimes, it is due to the sales person getting distracted with other activities.
- Other times, it could be due to “business menopause”; where he/she has already gained sufficient status/financial freedom and does not feel motivated anymore to execute the rightful activities.
- Pressure, in physics, is synonymous to a sales person’s mental focus.
- Pressure is the force applied perpendicular to the surface of an object per unit area over which that force is distributed (Wikipedia 2019).

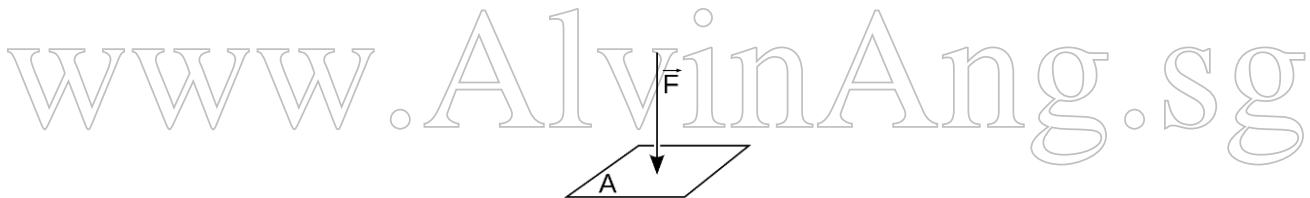


Figure 5: Pressure is the Force over Area (Wikipedia 2019)

$$P = \frac{F}{A}$$

Where:

- P: Pressure (synonymous to a sales person’s mental focus)

- F: Force ¹ (synonymous to a sales person's force, i.e. his activities and enthusiasm/motivation)
- A: Area (synonymous to a sales person's attention)
- Figure 5 shows that pressure is the force over a surface area. It is directly proportional to a sales person's force (which is a product of his activities and motivation); and indirectly proportional to his attention (surface area).
- In other words, a sales person with high positive activities and motivation (large force), and giving it his full mental attention (low surface area), will result in high pressure/focus.
- Often, this will lead to a breakthrough (or extreme great performance) in his sales figures.
- We can think of it synonymously to a lady wearing high heel shoes, stepping on tempered glass and cracking it.
- It is known that the pressure exerted on that singular point is far greater than the foot of an elephant because the surface area of the elephant is larger than the pointed heel.
- This is despite the fact that the weight of the elephant being far greater than the lady's weight.
- In contrast, a person with low motivation and wrongful activities (small force), coupled with lots of distractions (wide surface area), will result in low pressure/focus.
- These people will eventually drop out of the sales line and look for other jobs because their income is not able to sustain their livelihood.
- Thus, a sales person's focus is extremely crucial especially in his first few years.

¹ Force is defined as mass x acceleration Wikipedia. (2019). "Force." from <https://en.wikipedia.org/wiki/Force..> This will be elaborated in the next section on Newton's second law.

PART VI

HOW GOAL SETTING RELATES TO NEWTON'S SECOND LAW MOTION

- Goal setting is the second step of the sales process after envisioning (which is the first step as described by Levine (1990)).

Table 2: An Example of Various Clubs / Sales Targets in AIA Singapore (AIA 2014)

| Clubs | First Year Commission (S\$) |
|---|------------------------------------|
| *Rising Star | \$16,000 |
| Million Dollar Club Silver | \$26,000 |
| Million Dollar Club Gold | \$38,000 |
| Million Dollar Club Platinum | \$46,000 |
| Superstar Club Gold | \$61,000 |
| Superstar Club Platinum | \$73,000 |
| Centurion Club | \$88,000 |
| Pinnacle Club for FSD** | |
| 1 st Yr and 2 nd Yr | \$360,000 |
| 3 rd Yr onwards | \$520,000 |
| Pinnacle Club for FSAD/FSM | \$265,000 |
| Save a Life | No. of Lives |
| Bronze | 50 |
| Silver | 75 |
| Gold | 100 |
| Diamond | 150 |

- Table 2 shows an example of the various clubs / sales targets that insurance sales agents can try to achieve at American International Assurance (AIA) Singapore.
- A detailed, step by step goal setting example will be left out here because it is not the focus of this paper.
- Rather, for simplicity, we can just take for example a particular club (say Centurion Club), which is a yearly commission of \$88,000, and set that as a goal.

- In other words, when a sales person does his annual goal setting, he can actually use well-defined targets set by his company (like in Table 2), and work backwards on how he wishes to achieve that goal.

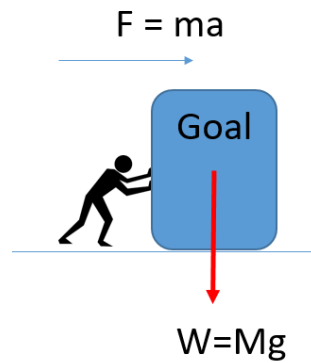


Figure 6: Goal Setting Analogous to Newton's Second Law of Motion

- Figure 6 shows how goal setting is analogous to Newton's second law of motion.
- Newton's second law of motion states that the force F on an object is equal to the mass m of that object multiplied by the acceleration a of the object (Wikipedia 2019).

Equation 1: Force Equation

$$F = ma$$

Where:

- m : mass. The amount of positive activities the agent does (see the next section on the topic of choice of activities). Positive activities generate greater force, while negative activities reduce that force significantly.
- a : acceleration. This refers to the level of enthusiasm/motivation of the agent. The more enthusiasm he puts in to his activities, the greater his force.
- The blue box in Figure 6 represents the goal set by the sales person.

- The weight of that object is related to the amount of force acting on the object, either due to gravity or to a reaction force that holds it in place (Wikipedia 2019).

Equation 2: Weight Equation

$$W = Mg$$

Where:

- M: Mass of the object. The “mass” / “size” of the goal set by the agent. The greater the income goal, the bigger the mass. For example, in the case of Table 2, a Rising Start Club will amass an annual goal of \$16,000 while Centurion Club will amass an annual goal of \$88,000 commission. Obviously, the bigger the goal, the harder to achieve/push.
- g: Gravitational Constant (in physics, it is $g = 9.81 \text{ ms}^{-2}$). This represents the natural “demotivational” factor our everyday life brings; since “g” pulls us downwards. E.g. failures, discouragements etc.

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PART VII

HOW THE CHOICE OF ACTIVITIES RELATE TO NEWTON'S THIRD LAW OF MOTION

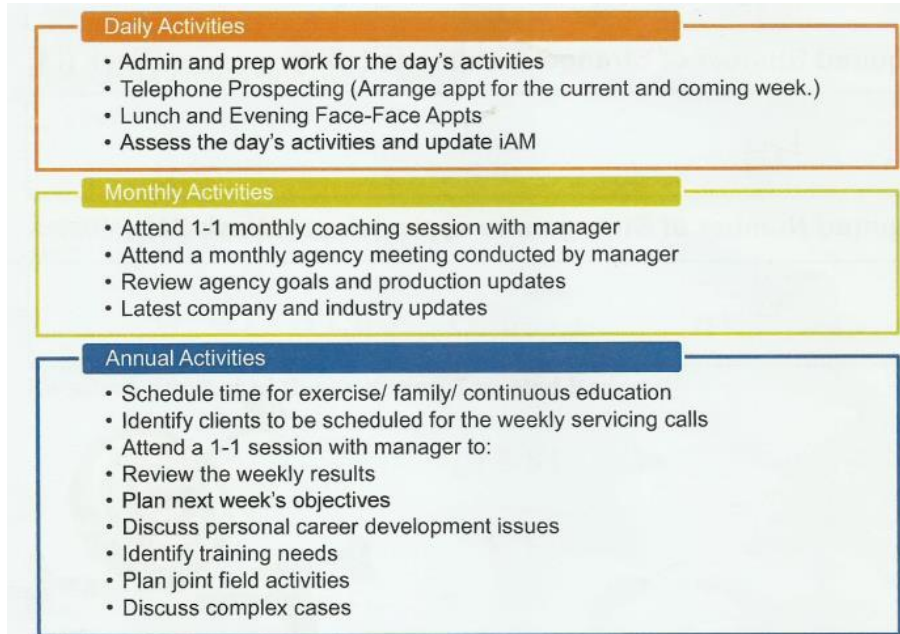


Figure 7: An Example of Daily / Monthly / Annual Activities for Sales Representatives (AIA 2014)

- Figure 7 shows a real life example of a sales person's daily / monthly / annual activities taken from (AIA 2014).
- They can be scheduled into Figure 8.

| TIME | Mon | Tues | Wed | Thu | Fri | Sat | Sun |
|--------------|--------------------------------------|-------------------------------------|-------------------------------------|---------------------------------|-------------------------------------|------------------------|----------------------|
| 0900 to 0930 | Update iAM | Administrative Work | | | | | |
| 0930 to 1000 | Regular District Meeting | Administrative Work | | | | Personal / Family Time | |
| 1000 to 1030 | | Coaching Session | Training & Professional Development | Corporate Solutions Appointment | Training & Professional Development | | |
| 1030 to 1100 | | Company Updates / Campaign Planning | | | | | |
| 1100 to 1130 | | | | | | | |
| 1130 to 1200 | | | | | | | |
| 1200 to 1230 | Lunch | | | | | | |
| 1230 to 1300 | Opening Interview | | | | | | |
| 1300 to 1330 | Opening Interview | | | | | | |
| 1330 to 1400 | Opening Interview | | | | | | |
| 1400 to 1430 | Opening Interview | | | | | | |
| 1430 to 1500 | Preparation Work | Corporate Solutions Appointment | Business Insurance Appointment | Preparation Work | Building COIs | Closing Interview | Family / Rest Day |
| 1500 to 1530 | | | | | | | |
| 1530 to 1600 | Case Submission | | | Case Submission | Motivational Session | | |
| 1600 to 1630 | | | | | | | |
| 1630 to 1700 | | | | | | | |
| 1700 to 1730 | | Opening Interview | Exercise | Opening Interview | Exercise | | |
| 1730 to 1800 | Servicing Calls | | | | | | |
| 1800 to 1830 | | | | | | | |
| 1830 to 1900 | Dinner | | | | | | |
| 1900 to 1930 | | | | | | | |
| 1930 to 2000 | Telephone Prospecting | Closing Interview | Telephone Prospecting | Closing Interview | Telephone Prospecting | Social Recreation Time | Next week's planning |
| 2000 to 2030 | | | | | | | |
| 2030 to 2100 | | | | | | | |
| 2100 to 2130 | Preparation of next day's activities | | | | | | |
| 2130 to 2200 | Preparation of next day's activities | | | | | | |

Figure 8: An Example of Time Tabling the Activities

- Newton's 3rd law of motion basically states that for every action there is an equal and opposite reaction (Wikipedia 2019). Figure 7 and Figure 8 shows how positive sales activities are inoculated into the sales person's schedule.
- This relates to Newton's third law of motion: for every positive activity /effort put in, there will be an equal and opposite positive result. And vice versa.
- This result may not appear immediately, but according to this law, it is bound to happen.
- This was mentioned in the earlier literature review section: Relating Newton's laws of motion to success

PART VIII

HOW SALES REVENUE RELATE TO THE LAW OF WORK DONE

(DISPLACEMENT FORMULA)

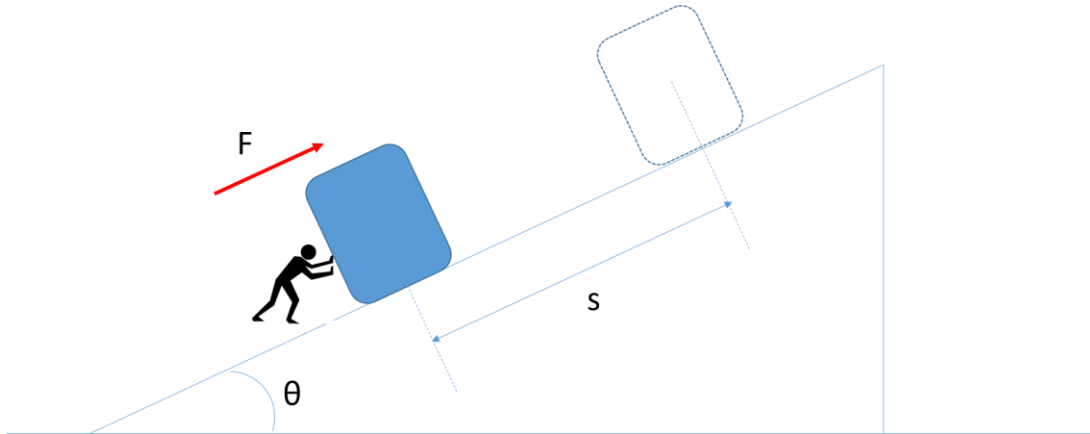


Figure 9: Work Done on an Object

- Work is the product of force and displacement.
- In physics, a force is said to do work if, when acting, there is a movement of the point of application in the direction of the force (Wikipedia 2019).
- Equation 3 shows the work done equation.

Equation 3: Work Done Equation

$$W = F \times s \times \cos\theta$$

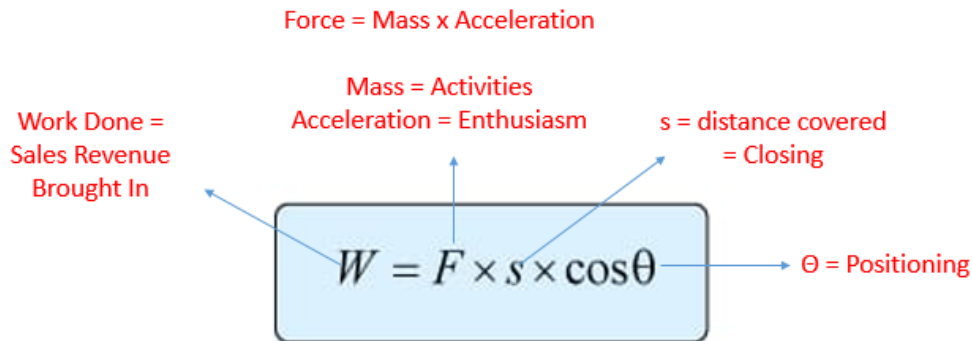
F = Force

s = Displacement

θ = angle between the force and the direction of motion.

- This work done equation analogy can be applied to the amount of sales revenue a person brings in.

Equation 4: Components of the Work Done Equation



- In reality, most sales people are by default willing to put in hard work.
- But hard work may not necessarily equate to sales revenue brought in.
- In other words, a sales agent may think of himself as doing a lot of “work” because he is very hardworking.
- But in the eyes of the company, his hard work boils down to nothing should he fail to bring in any revenue.
- Thus, the Universal Law of Physics states that “work done” is only accomplished when “sales move”; as compared to being stagnant.
- Referring to Figure 9, the blue box represents the sales goal that the agent is pushing.
- The measure of “Work done (sales revenue)” is dependent upon F: the force input by the agent.
- In section 5: Part VI
- How goal setting relates to Newton’s second law motion, we have already explained the components of $F=ma$, thus it will not be repeated here.

- “s” represents the distance covered, which is the actual number of products sold / closed by the agent.
- This refers to how good he is at closing sales. “ θ ” refers to positioning.
- The better his position, the lower the angle θ .
- Meaning, the easier it is for the sales person to achieve his goals.
- For example (in most real life cases), an insurance sales agent is the son/daughter of an Ultra High Net Worth (UHNW) individual.
- The definition of an UHNW individual is someone who holds more than S\$68.9 million (US\$50 million) in wealth (Lim 2018).
- Obviously, his network (family and friends) are likely to be encircled with wealthy relatives as well.
- This means that his positioning is far better than an agent who does not have rich relatives to sell High Net Worth (HNW) insurance products to.
- His probability of closing big sales is far higher than the poorer agent.
- Figure 9 is useful for both managers as well as sales representative.
- It helps them monitor their activities, ensure their optimal positioning, and know how well they are “closing” – distance covered.
- Key purpose here is for sales people to have a formula to keep track of, so that they work hard in the best direction to achieve results.
- In short, Figure 10 represents the analogy between work done and sales revenue.

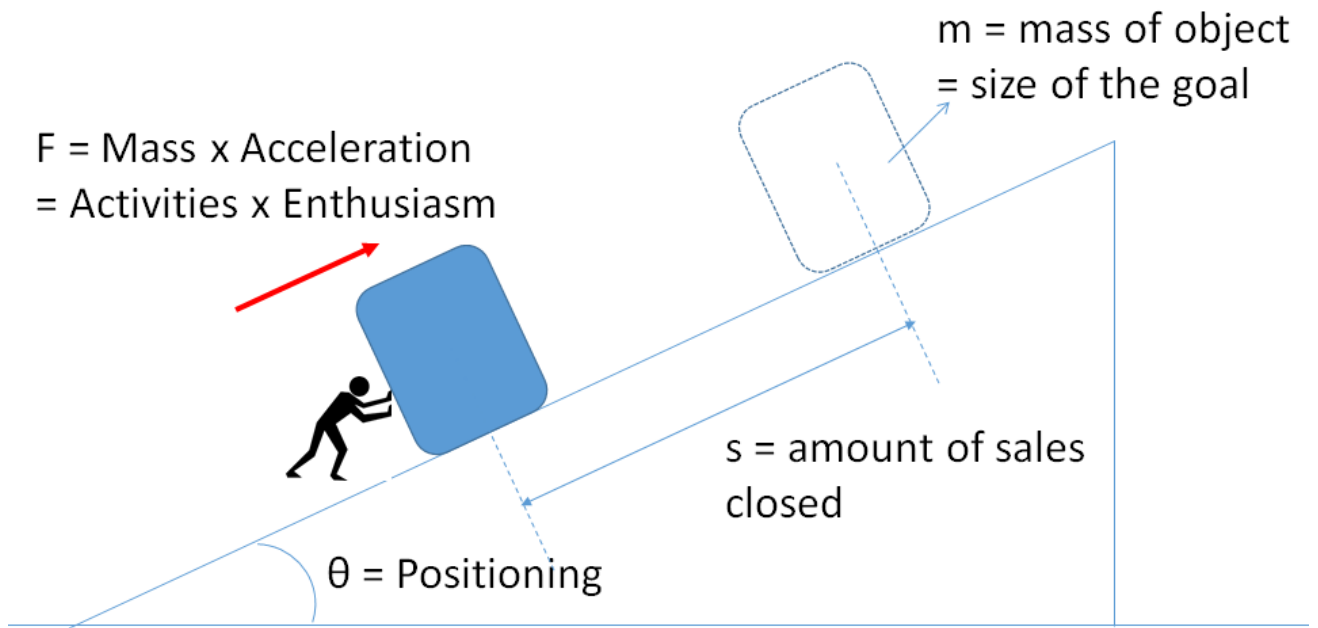


Figure 10: Work Done in Physics in Analogy to Sales Revenue

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THE RESISTIVE FORCE

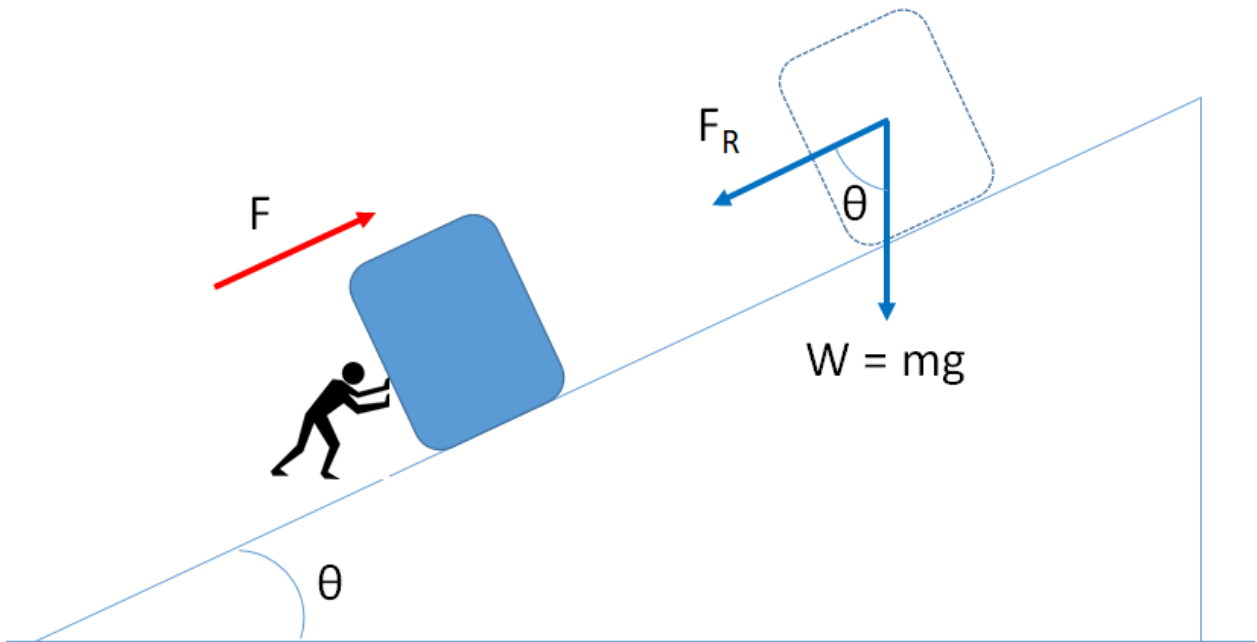


Figure 11: The Resistive Force, F_R

- Figure 11 shows the Resistive Force, F_R , coming from the weight of the object itself.
- In other words, F_R opposes F : the size of the goal opposes the pushing force from the salesman, especially if the positioning angle, θ , is poor.
- If $F > F_R$, the salesman is able to work towards his goals.
- But if $F < F_R$, his goal will crush him.
- He cannot move towards his goal at all. If $F = F_R$, this means he is at a standstill.
- No work is being done (i.e. no sales revenue is generated) because the goal isn't moving.

Equation 5: The Resistive Force, F_R

$$F_R = W \cos \theta$$

In physics, Weight = Mass x Gravitational Constant. Here in Equation 5, as already described in Equation 1,

- m : mass, is represented by the “mass” of the goal. In other words, the bigger the sales goal (represented by \$), the bigger the mass of the object.
- g : gravitational Constant (in physics, it is $g = 9.81 \text{ ms}^{-2}$). This represents the natural “de-motivational” factor our everyday life brings; since “ g ” pulls us downwards. E.g. failures, discouragements etc.
- θ : positioning (already described in Equation 4). The greater the angle θ , also means the lousier the positioning. Thus, the greater the Resistive Force, F_R .

Table 3: Contrasting Force by Salesman vs Resistive Force by Size of Goal

| Components of F (Force by Salesman) | Components of F_R (Resistive Force due to Size of Goal) | What does this mean? |
|--|--|---|
| Mass, M, represents sales activities of salesman | Mass of the block, m , represents the size of the sales goal set by the salesman. | In order for the Salesman to achieve his goal, his activities, M , need to be greater or equal to m . ($M \geq m$). Or rather, his activities needs to be streamlined / picked stringently to at least be of the same “mass” as his goal – or he won’t achieve it. |
| Acceleration, A, represents the salesman’s enthusiasm (or motivation) | Gravitational pull by the block, g , represents the de-motivational factors e.g. failures and discouragements. | The salesman needs to have overarching enthusiasm / motivation; over and above his de-motivational factors. He cannot allow $g > A$. If he allows his failures to discourage him past his motivation, his goals will slide backwards. |

PART IX

HOW RAISING THE SALES REVENUE POTENTIAL RELATES TO THE LAW OF
WORK DONE

(ENERGY CHANGE FORMULA)

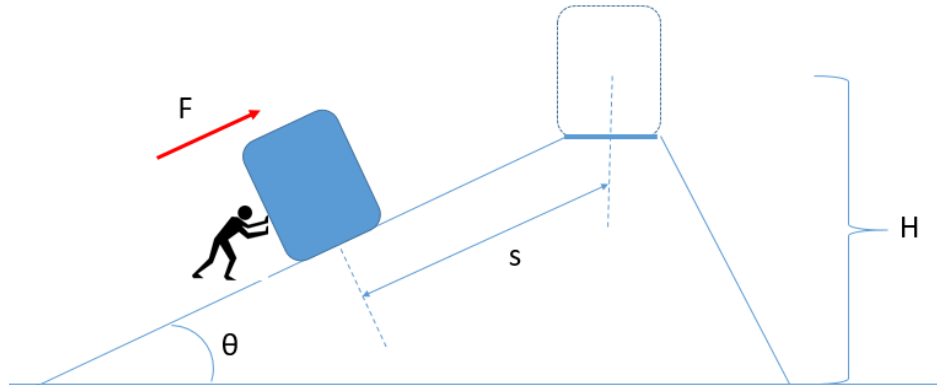


Figure 12: Work Done on a Different Slope

- Another definition of work done in physics as given in Wikipedia (2019) is a positive change in Kinetic Energy (KE) as opposed to a negative change in Potential Energy (PE).
- With reference to Figure 12: Work Done on a Different Slope; contrast this with Figure 9: Work Done on an Object.
- The sales agent is able to push the blue box (sales) to a peak (maximum PE), in which it can have a stand still.
- Should he tip it off the cliff, gravity will take place and the blue box will automatically roll down (maximum KE just before it hits the ground).

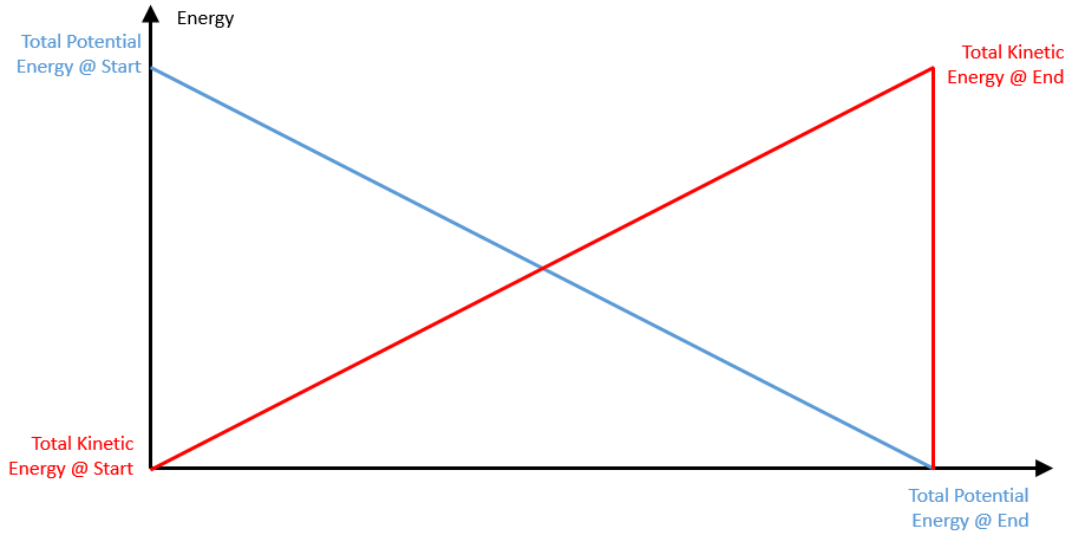


Figure 13 Work Done as Change in KE and PE as the box rolls down the cliff

- The change from PE to KE is shown in Figure 13, represented as work done as the box rolls down the cliff.
- This is also represented in Equation 6 below.

Equation 6: Work Done Formula (Energy Change)

$$W = \Delta KE = -\Delta PE$$

Where

- W : Work done
 - ΔKE : Change in Kinetic Energy (KE)
 - ΔPE : Change in Potential Energy (PE)
- The moral of the story here is this: even in tough times or poor positioning, if the sales person is willing to work hard to push sales even if the odds are against him, sales (the blue box) may gain sufficient PE, such that at a certain height, the agent may reap his rewards by simply putting in little effort to get sales moving (work done as it rolls off the cliff).



Melissa Sim

MR HASSAN (fourth from right) and his family run their nasi lemak business in two shifts with five people manning the stall at all times.

Adam Road Food Centre stall serves 1,000 plates of nasi lemak every day

FOURTEEN - family members run nasi lemak business at Adam Road Food Centre- and their combined salary is about \$400,000 a year.

On top of this income, there is also a profit-sharing exercise at the end of the year.

In fact, their business is doing so well, they opened a new stall in Ang Mo Kio three months ago.

Mr Hassan Abdul Kadil, 62, who started the business in 1998, said it was difficult in the beginning. "Nobody knew us, so it took almost three years to develop our name," he said.

But he is now reaping the fruits of his labour. He said his income is \$40,000 to \$50,000 a year and he declares it accordingly.

"I don't believe in underdeclaring. The law is the law. Even if you cheat now, you can't run tomorrow," said Mr Hassan, who does not hire an accountant.

The business is set up to run like clockwork. Each day, the stall opens from 6am to 10pm. There are two shifts and at any one time, five people will man the stall. Each of the 14 family members works six days a week, earning \$100 a day.

Mr Hassan said they sell about 1,000 plates of nasi lemak a day. At \$4 a plate, this amounts to a monthly gross takings of \$120,000.

But he continues to strive for a higher volume. "Without affecting the quality, we want to produce 200 to 300 more plates a day," he said.

CHOCKABLOCK WITH NASI LEMAK

Sunday Plus' panel of six delivers its verdict after sampling the offerings from five nasi lemak sta' boast either the longest line, the tastiest fare or the lowest price

The Sultan of Brunei gets his takeaway here

YUSOFF CORNER

◆ **WHERE:** Adam Road Food Centre, Stall

◆ **OPERATING HOURS:** 7am to 10pm every day except Fridays

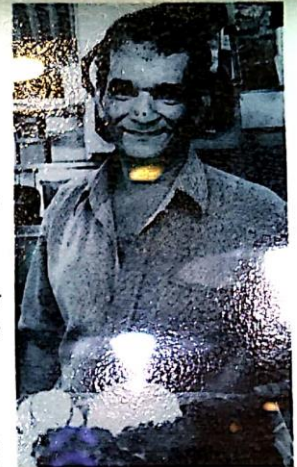
◆ **HYGIENE RATING BY ENVIRONMENT MINISTRY:** B "

◆ **PRICE:** \$3 gets you rice with a chicken wing, fried egg, ikan bilis and sambal with cuttlefish.

◆ **OWNERS:** Together with his wife, brother-in-law, Mr Hassan Abdul Kadil, 62, doles out 400 to 500 servings a day at this 3^{1/2} year old stall.

A former rooms division manager with the Hyatt Regency (now renamed the Grand Hyatt), the soft-spoken Indian Muslim with over 20 years in the hospitality trade knows what service is all about.

MPs and celebrities from Caldecott Hill aside, the Sultan of Johor and the Sultan of Brunei has also been known to send their



THOMAS WHITE

butlers here for takeaway orders.

◆ **WHAT'S HOT:** Top-grade basmati rice is used here and the difference is striking. Coupled with the skillful blend of coconut milk and pandan leaves, the wafting fragrance hits you at once.

Crispy on the outside but tender within, the well-marinated chicken also had the pan-clists licking their fingers.

Imbued with the sweet tang of cuttlefish, the sambal also scores.

No trace of rancid taste anywhere, since the various side dishes are fried and cooked only when the orders are placed.

◆ **WHAT'S HOT:** The slightly bitter peanuts might have overstayed their welcome in the wok.

◆ **OVERALL RATING:**

★★★★☆

Figure 14: Adam Road Nasi Lemak (Hob 2015)

- Let's take an example as analogy: Figure 14 shows a newspaper article featuring the storeowner of Adam Road's famous Nasi Lemak.
- Notice in the article, he said, "It took us almost 3 years to develop our name because nobody knew us."

- In other words, sales didn't start rolling in immediately – it took him 3 years.
- What was happening during those 3 years?
- Working hard to try to get sales of course.
- In analogy to Figure 12, the storeowner was pushing his sales goal upwards on a steep slope for three years, until it gained sufficient PE.
- Subsequently, once he was well known, all he needed to do was to tip the block off and sales would naturally move (be converted to KE).
- Another example would be that of a medical student studying hard for many years, pushing his knowledge and credentials up the peak.
- Once he becomes a well-known surgeon, he automatically gets referrals from patients thru word of mouth.
- In analogy to Figure 12, the medical student is actually pushing his status up the steep slope while he was studying.
- After he has gained sufficient experience and credentials, his PE is gained.
- He is able to convert that PE to KE easily (converting potential sales to real sales).
- Similarly, for new sales representatives, their first few years are the most painful because they find it difficult to obtain sales.
- The “harder” it gets, the “higher” their cliff, the “larger” the potential energy gained.
- This is analogous to the physics definition of PE as shown in Equation 7 (Wikipedia 2019).

Equation 7: Potential Energy Equation

$$PE = mgh$$

Where

- m: mass
- g: gravitational constant (9.81 m/s²)
- h: height
- If a sales person was born poor, had a difficult environment with lousy positioning, but yet he studied hard, learnt hard, and kept pushing the blue box, in effect, he is gaining a lot of PE within him (because he keeps increasing his potential “height”, h).
- This career height in sales could be defined as his sales knowledge gained, his expanding referral network, his social status and recognition.
- Once he reaches his peak, his PE can be naturally converted to KE, and this in return is considered “work done” or “sales revenue” brought in.

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PART X

HOW ENERGY MANAGEMENT RELATES TO THE LAW OF CONSERVATION OF ENERGY

- The law of conservation of energy states that energy can neither be created nor destroyed; rather, it can only be transformed or transferred from one form to another (Wikipedia 2019).
- There are mainly two kinds of energy in physics: kinetic and potential energy.

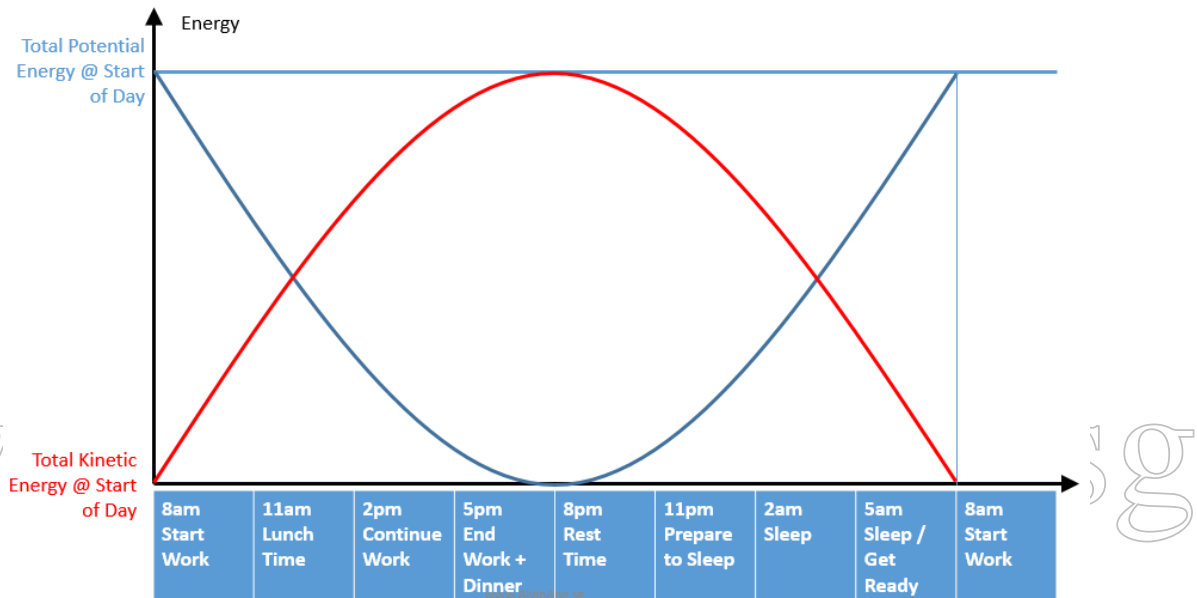


Figure 15: Total Conservation of Energy, Law of Physics Applied to a Typical Workday

- Figure 15 shows the energy levels of a typical workday for a corporate staff.
- When they start work in the morning, they should (theoretically) be full of potential energy, meaning, they are good to go.
- When it reaches around lunch time (which is mid-day), they should have used up half of their potential energy and converted them to kinetic energy; which also means that they have done work.

- After they knock off and reach home to rest, they recharge their potential energy back to the maximum.
- The cycle repeats the next day.
- In general, corporate staff are expected to convert their potential energy into kinetic energy during the day, and subsequently convert them back at night.
- Thus, it's important to know these times well, and work around them for maximum effectiveness.
- In Physics, energy is defined as the measure of the ability to do work (Britannica 2019, Wikipedia 2019).
- Thus, to do more work, sales people need to raise their potential energy levels.
- The concept of “work” for sales people, as opposed to work done in physics, will be defined in the later sections.
- High-energy work requires lots of mental energy, which is ultimately body energy.
- Some tips include to look for proteins and slow-release carbohydrates that will provide long-term nutrition instead of short bursts, like those from simple sugars (e.g. Coca cola) (Martin 2018).
- Since this paper's focus is on the similarities between laws of physics and sales management, we shall not dwell upon advice on raising energy levels; which can be found here (Schartz and McCarthy 2007, Martin 2018, Miller 2019).

PART XII

HOW PROMINENT SALES PEOPLE RELATE TO THE LAW OF POWER

- Power is defined as the rate of doing work in physics (Wikipedia 2019). Equation 8 shows the power equation.

Equation 8: Power Equation

$$Power = \frac{Work\ Done}{Time}$$

- However, in the business world, power refers to the ability to act, or, the possession of control over others (Merriem-Webster 2019).
- Referring to the wealthiest people in the world (Ang 2015), they are the most “powerful” people because they are market makers/movers.
- In analogy, they have captured the most/maximum amount of “work done” (sales revenue) with respect to their “time taken”, relative to most middle class / middle income earners.

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CONCLUSION

- The objective of this paper was to provide sales people with an analogy of sales management to the laws of physics.
- The purpose was for them to have a point of reference, or gut feel, on how they can relate the laws of physics to managing their sales.

Table 4: How Law of Physics and Sales Strategies are linked

| Law of Physics | Sales Strategies |
|-------------------------------|-------------------------|
| Newton's First Law of Motion | Envisioning |
| Momentum | Mission statement |
| Pressure | Sales Targets |
| Newton's Second Law of Motion | Goal Setting |
| Newton's Third Law of Motion | Choice of Activities |
| Work Done (Displacement) | Revenue Management |
| Work Done (Energy Change) | Funnel Management |
| Total Conservation of Energy | Energy Management |
| Power | Prominent Rate of Sales |

- Table 3 shows how each law of physics is related to every sales management strategy.
- In order for sales managers to manage their team well, they need to understand, identify and apply each of the technique well for them to be successful in sales.

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